REMARKS

Applicants have amended the claims to comply with U.S. patent practice in matters of form and to remove certain multiple dependency. Also, a marked-up version of the claims entitled "Version With Markings To Show Changes Made" is submitted herewith. After entry of this Amendment, claims 1-17 are pending in this application. The amendments do not introduce new matter. Entry of this Amendment is respectfully requested.

The total filing fee on the Transmittal Letter To The United States Designated/Elected Office (DO/EO/US) Concerning A Filing Under 35 U.S.C. §371 is calculated on the basis of this Amendment.

Respectfully submitted:

By: ____________________

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Version With Markings to Show Changes Made

1. (Amended) A thermostable [Thermostable] enzyme comprising [exhibiting] 3'-exonuclease-activity but essentially no DNA polymerase activity, said [whereas this] enzyme enhancing [enhances] fidelity of an amplification process when added to a second enzyme exhibiting polymerase activity.

2. (Amended) The thermostable [Thermostable] enzyme according to claim 1 obtainable from *Archeoglobus fulgidus*.

3. (Amended) The thermostable [Thermostable] enzyme according to claim 1 which [or 2 whereas this enzyme] is able to cooperate as proofreading enzyme with a second enzyme exhibiting polymerase activity.

4. (Amended) The thermostable [Thermostable] enzyme according to claim 1 which [, 2 or 3 whereas the enzyme] exhibits reduced DNA polymerase activity.

5. (Amended) A composition [Composition] comprising a first thermostable enzyme exhibiting 3'-exonuclease-activity but essentially no DNA polymerase activity and a second enzyme exhibiting DNA polymerase activity, said composition enhancing [whereas] the fidelity of an amplification process [is enhanced by the use of the composition] in comparison to the use of the single second enzyme.

6. (Amended) The composition [Composition] according to claim 5 wherein [whereas] the second enzyme is lacking proofreading activity.

7. (Amended) The composition [Composition] according to claim [5 or] 6 wherein [whereas] the second enzyme is Taq polymerase.

8. (Amended) A method of preparing or amplifying DNA comprising incubating DNA with the [using a] composition according to claim 6.

9. (Amended) The method of claim 8 wherein [whereas] prematurely terminated chains

are trimmed by degradation from 3′ to 5′.

10. (Amended) The method according to claim 8 wherein [one of the claims 8 or 9 whereas] mismatched ends of either a primer or the growing strand are removed.

11. (Amended) The method according to claim 8 wherein [one of the claims 8 to 10 whereas] dUTP instead of TTP is present in the reaction mixture.

12. (Amended) The method according to claim 11 wherein [whereas] UNG is used for degradation of contaminating nucleic acids.

13. (Amended) The method according to claim 8 wherein [one of the claims 8 to 12 whereas] the mixture of a
- first thermostable enzyme exhibiting 3'-exonuclease-activity but essentially no DNA polymerase activity and
- a second enzyme exhibiting DNA polymerase activity
produces PCR products with lower error rates compared to PCR products produced by the second enzyme exhibiting DNA polymerase activity in absence of the first thermostable enzyme exhibiting 3'-exonuclease-activity but essentially no DNA polymerase activity.

15. (Amended) The method according to claim 8 wherein [one of the claims 8 to 14 whereas] the first thermostable enzyme exhibiting 3'-exonuclease-activity but essentially no DNA polymerase activity is related to the Exonuclease III derived from E.coli, but is thermostable.

16. (Amended) The method according to claim 8 [one of the claims 8 to 15 whereas] wherein PCR products with blunt ends are obtained.

17. (Amended) A method for amplifying DNA comprising incubating DNA with [using]

a thermostable enzyme exhibiting 3'-exonuclease-activity which enzyme is not or only to a negligible extent [extend] active on linear single stranded DNA.